

Docket F-3278C

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT
APPEALS AND INTERFERENCES

In re application of: Skeem et al.

Serial No.: 08/892,836

Group No.: 3723

Filed: July 15, 1997

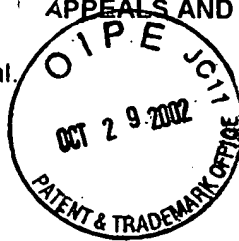
Examiner: G.Nguyen

For: Metal Single Layer Abrasive Cutting Tool Having a Contoured Cutting Surface

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231



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TRANSMITTAL OF REQUEST FOR REHEARING UNDER 37 CFR SECTION 1.197(b)

Transmitted herewith is a Request For Rehearing in this application with respect to the Decision on
Appeal No. 2000-0207 mailed on September 20, 2002

If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 14-1400.

AND/OR

If any additional fee for claims is required, charge Account No. 14-1400.

CERTIFICATE OF MAILING (37 CFR 1.8a)

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Sir:

**REQUEST FOR REHEARING
UNDER 37 CFR SECTION 1.197(b)**

Appellants request a rehearing and reconsideration of points believed to have been misapprehended or overlooked in the Board's decision, mailed September 20, 2002, in the above-captioned appeal. Brief descriptions of four such points are set forth below. These points seem to have been decisive in the Board's decision to affirm the Examiner's 35 USC Section 103(b) rejection of claims 1, 5-9, 11-26 and 30-33.

POINTS FOR REHEARING

Pages 11-12 of Decision:

The Board concluded Appellants' Buljan II evidence of non-obviousness was ineffective for overcoming the Examiner's rejection of claims 1, 5-9, 11-26 and 30-33, directed to tools without a negative rake orientation. The Board stated a proper nexus was lacking between the Buljan II evidence and claim 1. Appellants direct the Board's attention to invention sample 280, a saw blade manufactured with pyramidal shaped

teeth of a roughly equilateral shape. These teeth do not have a negative rake orientation. Nonetheless, the data show exceptional performance, secondary only to invention saw blade sample 277 with teeth having a negative rake orientation (see paragraph 3, paragraph 6 and Appendix A of the Buljan II declaration). Thus, there is a proper nexus between the evidence of non-obviousness and the rejected claims.

Pages 10-11 of the Decision:

The Board noted the Buljan I declaration merely reinforced the expected results of the teaching of the Lowder reference. However, well into the prosecution of the application, and only after Appellants had submitted the Buljan I declaration, the Examiner *first* cited Lowder as evidence of knowledge in the art regarding use of a chemically active bond in brazed diamond tools. Once the Examiner had changed the basis for his obviousness rejection, Buljan I was no longer relevant and Appellants submitted the Buljan II declaration to address the new combination of references. Thus, only the Buljan II declaration is relevant to the particular rejection under review on appeal.

Page 10 of the Decision:

The Board states Appellants have not argued independent claims 13 and 30 (nor dependent claims 5-9, 11-12, 17-26 and 31-33) with specificity and concludes no analysis is needed beyond the *prima facie* case of obviousness established for claim 1 to affirm the Examiner's rejection. However, on pages 11-12 of Appellants' brief, Appellants did argue the steady state cutting conditions achieved by the process and tool described and claimed in independent claims 13 and 30 cannot be achieved by the combination of prior art cited by the Examiner. Further the tools of claim 30 can be operated in the process of claim 13 by rotating in either direction without regard for the rake angle of the teeth and continue to yield a desirable steady state cutting operation.

Page 9 of the Decision:

The Board interprets the Asada reference by equating Asada's "8b" grain structure to Appellants' "first uppermost cutting level of grains". Taken as a whole, this

appears to be a misinterpretation of Asada and of Appellants' claimed invention. Appellants interpret Asada by viewing Asada's "8a" grain structure (see Fig. 5), an intermediate structure that must be removed before the tool is used for cutting, as the structure matching Appellants' "first uppermost cutting level of grains". Asada teaches the uppermost layer of diamond on the perimeter of the teeth (8a) should be removed prior to use of the tool (see, e.g., col. 2, lines 10-22, of Asada). This is not a minor, nor an optional, teaching of the Asada reference. As shown in Figures 11-12 of Asada, the 8a grains must be removed from the top of the teeth before the tool is used so as to avoid inconsistent wear of the tool during cutting.

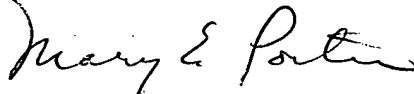
In contrast, Appellants tools include a "first uppermost cutting level of grains" on the **top** of the teeth. See, Figures 4 and 5, page 12, lines 12-17, and page 13, lines 3-11, Figure 6, grain 13, Figure 3, grain 1 and figure 7, grain 22.

As the obviousness analysis of the claimed tool and cutting method without a negative rake orientation concerns U.S. Pat. No. 5,018,276 to Asada ("Asada"), in view of U.S. Pat. No. 3,894,673 to Lowder, et al. ("Lowder") and does not concern U.S. Pat. No. 5,215,072 to Scott ("Scott"), one skilled in the art must find in Asada some reason to combine the braze of Lowder with a tool having teeth with a first cutting layer of grain on the top of the teeth and successive cutting layers of rings of grain. Since Asada teaches removal of the grain adhered to the top of the teeth before cutting with the tool, Asada suggests there should not be a tooth structure having a first cutting layer of grain on the top of the teeth. Given the absence of a top grain structure in the Asada tool, Lowder's braze cannot transform the Asada tool to deliver the performance evidenced by the Buljan II declaration or the steady state cutting performance illustrated in Appellants' Figure 2. Due to these significant structural and performance dissimilarities between the cited reference and the invention, the rejection fails to sustain a prima facie case of obviousness. See, In re Grabiak, 226 USPQ 870 (Fed. Cir., 1985).

CONCLUSION

In view of the remarks set forth herein, and the remarks of record, Appellants respectfully request reconsideration of the Board's decision to affirm the Examiner's rejection of claims 1, 5-9, 11-26 and 30-33, and a remand to the Examiner for an allowance of all claims pending in the application.

Respectfully submitted,



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October 22, 2002

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